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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 5

Complete if Known

Application Number	10/711279
Filing Date	September 7, 2004
First Named Inventor	Gary Haughton
Art Unit	
Examiner Name	
Attorney Docket Number	93177pusB

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 6,070,348	06-06-2000	Bianchetti	
		US- 6,007,237	12-28-1999	Latto	
		US- 5,947,784	09-07-1999	Cullen	
		US- 5,813,760	09-29-1998	Strong	
		US- 5,738,018	04-14-1998	Burnett	
		US- 5,100,242	03-31-1992	Latto	
		US- 5,052,813	10-01-1991	Latto	
		US- 4,534,914	08-13-1985	Takahashi et al.	
		US- 4,440,616	04-03-1984	Houseman	
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		US- 4,319,971	03-16-1982	Good et al.	
		US- 4,302,318	11-24-1981	Mock	
		US- 4,189,362	02-19-1980	Dotson	
		US- 4,169,681	10-02-1979	Kato	
		US- 4,125,439	11-14-1978	Fleischmann et al.	
		US- 4,054,503	10-18-1977	Higgins	

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		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
		DE	75 04 145	U	06-19-1975	Muller		
		SU	858 898	A	08-30-1981	Umarnskii		
		SU	967 541	A	10-23-1982	Fomenko		
		FR	2 605 244	A	04-22-1988	Bionaz		
		WO	02/083280	A1	10-24-2002	Arnosco Technology Ltd.		

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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		US- 3,912,237	10-14-1975	Ostberg et al.	
		US- 3,560,366	02-02-1971	Fisher	
		US- 3,214,148	10-26-1965	Thomas	
		US- 2,661,938	12-08-1953	Kuentzel et al.	
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		US- 2,557,503	06-19-1951	Hogaboom, Jr.	
		US- 2,064,402	12-15-1936	Bannister et al.	
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		US- 567,503	09-08-1896	Pelatan & Clerici	
		US- 52,890	02-27-1866	Ryerson	
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		JP	11 184 420	A	07-09-1999	Mitsubishi Electric Corp.		
		GB	1 147 378	A	04-02-1969	Davis		
		JP	63104638		05-10-1988	Yoshida Masatoshi		
		DE	7416500		08-22-1974	Messerschmitt- Bolkow-Blohm		

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		FR	1 604 693	A	01-03-1972	Institut Merieux		

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Application Number

10/711279

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September 7, 2004

First Named Inventor

Gary Haughton

Art Unit

Examiner Name

Attorney Docket Number

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		TURNER, J.S. Intermittent Release of Smoke from Chimneys. Journal of Mechanical Engineering Science 1960, Vol. 2, No. 2, pages 97-100.	
		KENDIG, F. The Science of Smoke Rings and Doughnuts. Saturday Review, March 18, 1972, pages 40 and 44.	
		MAXWORTHY, T. Turbulent Vortex Rings. J. Fluid Mech. 1974, Vol. 64, Part 2, pages 227-239.	
		BAIRD et al. Velocity and Momentum of Vortex Rings in Relation to Formation Parameters. The Canadian Journal of Chemical Engineering, February 1977, Vol. 55, pages 19-26.	
		MAXWORTHY, T. Some Experimental Studies of Vortex Rings. J. Fluid Mech. 1977, Vol. 81, Part 3, pages 465-495.	
		SAFFMAN, P.G. The Number of Waves on Unstable Vortex Rings. J. Fluid Mech. 1978, Vol. 84, Part 4, pages 625-639.	
		ROHATGI, A. Mixing Effects and Hydromatics of Vortex Rings. Ph.D. Thesis at McMaster University, Hamilton, Ontario, June 1978.	
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				Application Number	10/711279
				Filing Date	September 7, 2004
				First Named Inventor	Gary Houghton
				Art Unit	
				Examiner Name	
Sheet	5	of	5	Attorney Docket Number	93177pusB

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		GLEZER, A. An Experimental Study of a Turbulent Vortex Ring. Ph.D. Thesis at California Institute of Technology, Pasadena, California, 1981.		
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